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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,656	12/05/2003	Ashutosh Agrawal	4998P022	1279
8791 7590 12/31/2007 BLAKELY SOKOLOFF TAYLOR & ZAFMAN 1279 OAKMEAD PARKWAY SUNNYVALE, CA 94085-4040			EXAMINER JUNTIMA, NITTAYA	
			ART UNIT 2616	PAPER NUMBER
			MAIL DATE 12/31/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/728,656		AGRAWAL ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Nittaya Juntima		2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 45 and 46 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,8,16-23,25-33 and 39-44 is/are rejected.
- 7) ☒ Claim(s) 2,5,6,9-15,24 and 34-38 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities:
  - the corresponding application number and status of the applications listed on pages 2, 7, and 16 should be updated;

Appropriate correction is required.

### *Claim Objections*

2. Claims 1, 2, 3, 5, 6, 9, 10, 19, 28, 36, and 41 are objected to because of the following informalities:
  - in claim 1, line 2, "a first protocol" should be changed to "a first signal protocol" to avoid lack of antecedent basis in/be consistent with claims 2, 3, 5, 10, 12, 13, and 16;
    - line 5, "a second protocol" should be changed to "a second protocol" to avoid lack of antecedent basis in/be consistent with claims 2, 5, 6, 9, 20;
  - in claim 3, line 1, "wherein" should be changed to "further comprising";
    - line 2, "which" should be inserted after "format" to put the claim in a better form as claim 1 does not include the step of converting a data stream;
  - in claim 2, line 5, "the second protocol" should be changed to "the second signal protocol";
    - line 6, "a second" should be changed to "the second";

- in claim 5, line 6, "a second" should be changed to "the second" for consistency purposes;

- in claim 6, line 4, "the data stream" should be changed to "the individual data streams" to be consistent with the limitation in line 1 of the claim;

line 6, "the group of data" should be changed to "the two or more groups of data" to be consistent with the limitation in line 2 of the claim;

- in claims 9 and 10, line 1, "claim 1" should be changed to "claim 2";
- in claims 19 and 28, line 1, "switching" should be removed;
- in claim 36, line 1, "claim 23" should be changed to "claim 24";
- in claim 41, line 1, "claim 39" should be changed to "claim 40".

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4, 25-27, 29-33, 40, 43-44, 47-49, 50-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, the limitation "wherein transmitting the first group of data blocks...to the processing resource comprises routing the group of data...over the switching fabric" is vague and indefinite as logically it does not make any sense for the step of routing of the data block from an ingress line to be included in the transmitting step which happens after the receiving step

and converting steps. In other words, it is unlogical for the data blocks to be received from the switching fabric, converted, then routed from ingress line card and transmitted over the switching fabric to a processing resource. In addition, "the processing resource" in line 2 of the claim lacks antecedent basis and it is unclear whether "the group of data blocks" in lines 2-3 refer to the first group of data blocks or the first set of two or more groups of data blocks.

In light of the specification, the limitation is interpreted as "wherein receiving the first group of data blocks over the switching fabric comprises routing the first group of data blocks from an ingress line card to a processing resource over the switching fabric."

In claim 25, the limitation "the first signal protocol" lacks antecedent basis.

In claim 29, the limitation "the second signal protocol" lacks antecedent basis.

In claim 40, line 7, the limitation "the first signal protocol" lacks antecedent basis.

In claims 43 and 44, line 2, the limitation "the first signal protocol" lacks antecedent basis.

In claim 47, line 1, the limitation "the first signal protocol" lacks antecedent basis.

In claim 50, line 1, the limitation "the second signal protocol" lacks antecedent basis.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 4, 7-8, 16-23, 25-33, and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimbashi (US 6,798,779 B1).

Regarding claim 1, as shown in Fig. 5, Shimbashi teaches a method comprising:

Receiving a first group of data blocks (STS-1 frames in (5) of Fig. 7) carrying data according to a first signal protocol (DS-1 data mapped to VT and ATM data carried by STS-1 frames in (5) of Fig. 7 constitute a first signal protocol) and having a predetermined format (STS-1 frame format) from a switching fabric (interface cards 1-n and 1'-n', STS switching unit, VT switching module, ATM switching module of Fig. 5 constitute a switching fabric). See col. 7, lines 39-41 and col. 8, lines 23-26 and Fig. 6.

Converting the first group of data blocks (STS-1 frames in (5) of Fig. 7) to a first set of two or more groups of data blocks (STS-1 frames in (7) of Fig. 8) carrying data according to a second signal protocol (VT data carried by STS-1 frames in (7) of Fig. 8 constitutes a second signal protocol) and having the predetermined format (STS-1 frame format). See col. 8, lines 33-41.

Transmitting the first set of two or more groups of data blocks (STS-1 frames in (7) of Figs. 5 and 8) over the switching fabric (VT switching module which is part of switching fabric). See col. 8, lines 47-57.

Regarding claim 4, Shimbashi teaches routing the first group of data blocks (STS-1 frames in (5) of Fig. 7) from an ingress line card (interface card 2, Fig. 5) to a processing resource (VT switching module, Fig. 5) over the switching fabric (interface cards 1-n and 1'-n',

STS switching unit, VT switching module, ATM switching module of Fig. 5 constitute a switching fabric). See col. 7, lines 39-41, col. 8, lines 33-57.

Regarding claim 7, Shimbashi teaches routing the two or more groups of data blocks (STS-1 frames in (7) of Figs. 5 and 8) from a source processing resource (not defined, reads on an input port where (7) in Fig. 5 enters VT switching module) to a destination processing resource (not defined, reads on an output port where STS-1 frames in (9) exits from VT switching module in Fig. 5) over the switching fabric (interface cards 1-n and 1'-n', STS switching unit, VT switching module, ATM switching module of Fig. 5 constitute a switching fabric). See col. 7, lines 42-52, col. 8, lines 33-57 and Fig. 8.

Regarding claim 8, Shimbashi teaches that the source processing resource (an input port where (7) in Fig. 5 enters VT switching module) and the destination processing resource (an output port where STS-1 frames in (9) exits from VT switching module in Fig. 5) for a selected group of data blocks (STS-1 frames carrying only VT data) comprises a single processing resource (VT switching module, Fig. 5). See col. 8, lines 33-41 and 47-57.

Regarding claims 16 and 18, Shimbashi also teaches that the first signal protocol (DS-1 data mapped to VT and ATM data carried by STS-1 frames in (5) of Fig. 5 constitute a first signal protocol) comprises a plesiochronous signal including DS data stream (DS-1 data). See Figs. 5-7 and col. 7, lines 65-col. 8, lines 8.

Regarding claim 17, Shimbashi also teaches that the plesiochronous signal comprises STS-1 data stream (STS-1 frames at (5) in Fig. 5 carrying VT data which carries DS-1 data, see Figs. 6-7 and col. 7, lines 65-col. 8, lines 8, 15-22).

Regarding claim 19, it is inherent that the predetermined format (STS-1 frame format in Figs. 5, 7, and 8) must comprise a data cell (STS-1 frame) having a predetermined data payload (STS-1 payload) and a header (section and line over head).

Regarding claims 20 and 21, Shimbashi also teaches that the second signal protocol (VT data carried by STS-1 frames in (7) of Figs. 5 and 8 constitutes a second signal protocol) comprises synchronous signal including a VT data stream (VT signal).

Regarding claim 22, since Figs. 5 and 6 show that DS1 data is mapped into VT to form STS-1 frame in point (5), it is inherent that the VT data stream must comprise of VT1.5.

Regarding claim 23, as shown in Fig. 5, Shimbashi teaches an apparatus comprising:

An ingress interface (input port where (5) enters STS switching unit) to receive an ingress group of data blocks (STS-1 frames (5)) having a predetermined format (STS-1 format) to provide a data stream according to a first protocol (STS-1 frames carrying ATM and DS-1 data mapped in VT). See col. 7, lines 39-41, col. 8, lines 15-27, and Fig. 7.

Demapping circuitry coupled with the ingress interface (STS switching unit must contain a demapping circuitry that convert input STS-1 frames containing ATM data and DS-1 data



mapped in VT into STS-1 frames containing just VT data) to convert the data stream according to the first protocol to one or more data streams according to a second protocol (STS-1 frames carrying VT data (7)). See col. 8, lines 33-46 and Fig. 8.

A segmenter (an inherent within the STS switching unit that forms (12)) coupled with the demapping circuitry to convert the one or more data streams according to the second protocol (STS-1 frames carrying VT data (7)) to one or more corresponding egress groups of data blocks ((12)) having the predetermined format (STS-1 frame format). See 8, lines 47-57, col. 9, lines 19-26, and Fig. 9.

An egress interface (output port of STS switching unit that transmits (12)) coupled with the segmenter to transmit the one or more egress groups of data blocks. See col. 9, lines 19-26.

Regarding claims 25 and 27, Shimbashi teaches that the first protocol (DS-1 data mapped to VT and ATM data carried by STS-1 frames in (5) of Fig. 5) comprises a plesiochronous signal including DS data stream (DS-1 data). See Figs. 5-7 and col. 7, lines 65-col. 8, lines 8.

Regarding claim 26, Shimbashi also teaches that the plesiochronous signal comprises STS-1 data stream (STS-1 frames at (5) in Fig. 5 carrying VT data which carries DS-1 data, see Figs. 6-7 and col. 7, lines 65-col. 8, lines 8, 15-22).

Regarding claim 28, it is inherent that the predetermined format (STS-1 frame format in Figs. 5, 7, and 8) must comprise a data cell (STS-1 frame) having a predetermined data payload (STS-1 payload) and a header (section and line over head).

Regarding claims 29-32, Shimbashi also teaches that the second signal protocol (VT data carried by STS-1 frames in (7) of Figs. 5 and 8 constitutes a second signal protocol) comprises synchronous signal including a VT data stream (VT signal) and conforming to the SONET/SDH standards.

Regarding claim 33, since Figs. 5 and 6 show that DS1 data is mapped into VT to form STS-1 frame in point (5), it is inherent that the VT data stream must comprise of VT1.5.

Claim 39 is an apparatus claim corresponding to method claim 1 and is therefore rejected under the same reason set forth in the rejection of claim 1.

***Allowable Subject Matter***

6. Claims 45-46 are allowed. The prior art alone or in combination fail to teach or make obvious on the following when considered in combination with other limitations in the claim: demapping circuitry coupled with the ingress interface to convert the data stream according to the first protocol received in group of data blocks having a predetermined format to one or more data streams according to a second protocol; a segmenter coupled with the demapping circuitry to convert the one or more data streams according to the second protocol to one or more corresponding egress groups of data blocks having the determined format; mapping circuitry coupled with the second ingress interface to convert the one of more data streams according to the second protocol received as one or more ingress groups of data blocks having the

predetermined format to a single data stream according to the first protocol; a second segmenter coupled with the mapping circuitry to convert the single data stream according to the first protocol to a group of data blocks having the predetermined format; and a switch fabric that coupled with the ingress and second ingress interfaces, the egress and the second egress interfaces, and a plurality of line cards as recited in independent claim 45.

7. Claims 2, 5, 6, 9, 10-15, 24, and 34-38 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 3 and 40-44 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 571-272-3120. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Nittaya Juntima  
December 21, 2007

*NJ*

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